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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,822	09/18/2001	Kenneth John Laurence	01831049	3598

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Douglas M. Eveleigh
Mayer, Brown & Platt
190 South LaSalle Street
Chicago, IL 60603

EXAMINER

SALVATORE, LYNDA

ART UNIT PAPER NUMBER

1771

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/955,822		LAURENCE ET AL.	
	Examiner		Art Unit	
	Lynda M Salvatore		1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-103 is/are pending in the application.
- 4a) Of the above claim(s) 1-19,43-52 and 75-83 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-42,53-74 and 84-102 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II, claims 20-42, 53-74, and 84-103 is acknowledged. The traversal is on the ground(s) that search and examination of Groups II, II, and III can be made together without serious burden to the Examiner. This is not found persuasive because the claims of Group II add additional elements (i.e., water resistant substrate and adhesive layers) not found in the subset of Group I. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper. With regard to the method claims of Group III, the search required for Group I and II is not required for Group III. As such, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

2. Claims 20, 24, 26, 33, 37, 42, 53, 57, 59, 65, 69, 74, 88, 89 and 103 are objected to because of the following informalities: PETG needs to be written out as polyethylene terephthalate glycol. Claim 89 is objected to because of the following informalities: PCTG needs to be written out as polycyclohexanedimethyl terephthalate glycol. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 25, 41, 58 and 73 are indefinite because of the improper markush group. An example of a proper markush group is "wherein R is a material selected from the group consisting of A, B, C and D". See MPEP 2173.05(h).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 20,22,24,29,53,55,57,65,67,69,84,86,88 and 90 are rejected under 35 U.S.C. 102(b) as being anticipated by Eckart et al., US 5,643,666.

The patent issued to Eckart et al., is directed to a laminate comprising an outer layer of transparent PETG copolyester, a decorative polymeric film having a high-resolution image printed thereon, and a backing layer (Abstract and Figure 1). Eckart et al., teaches that the backing layer is also prepared from PETG copolyester, preferably recycled PETG (Column 5, lines 5-8). In this instance, the backing layer corresponds to the Applicant's core layer of PETG and the outer layer of PETG corresponds to the overlay layer recited in claim 8. With respect to the low pressure limitations set forth in claims 3 and 16, Eckart et al., teaches bonding the laminate under pressures ranging from 100 psi to about 350 psi (Column 7, 10-16). Moreover, Eckart et al., also teaches that the pressures needed to thermoform various shapes are a function of temperature, the product shape, and the tools used to thermoform the laminate (Column 8, 7-12).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 20-30, 32-39, 41, 42, 53-63, 65-71, 73, 74, 84-88, 90-94, 96, 97-99 and 100-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Min, US 6,093,473 in view of Eckart et al., US 5,643,666.

The patent issued to Min is directed to an abrasion resistant laminate comprising a multi-layer wear resistant top layer, a decorative layer, a core layer, and a polymeric substrate base layer (Abstract). The wear resistant layer may consist of an overlay sheet having abrasion resistant particles (Column 2, lines 55-60). The core layer may comprise one or more additional layers formed from fiberglass, polypropylene, polyester, nylon, or carbon fiber. Min further teaches that the core layer may comprise resin impregnated woven or non-woven sheets (Column 3, lines 1-10). Figure 2, illustrates a laminate having a wear resistant top layer assembly comprising an adhesive layer, and a base layer. Said top layer assembly includes a wear resistant upper layer, an overlay layer, and a decorative layer, which are laminated to a core layer and a base layer. In addition, a thin balance layer may be laminated to the base layer (Column 4, 40-52 and Figure 2). Said thin balance layer may be formed from non-woven fabrics, or polyvinyl chloride (Column 8, 33-42). The water resistant polyvinyl chloride polymeric base layer is

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laminated beneath the top layer assembly with a water resistant adhesive (Abstract, Column 8, 11-25 and Figures 1A-3). The waterproof adhesive may be coated on the bottom surface of the core layer or on the top surface of the polymeric base layer, or can be in the form of a separate adhesive film (Column 8, 46-55). Additionally, the polyvinyl chloride polymeric base layer may further include fillers, additives, and modifiers (Column 8, 28-31). With regard to claim 100, Min does not teach adding fillers to the thin balance layer, which may comprise polyvinyl chloride. As such, it is the position of the Examiner that a filled polyvinyl chloride polymeric base layer laminated to a non-filled polyvinyl chloride balance layer meets the limitation of having a second polyvinyl chloride less filled than the first polyvinyl chloride layer. Min teaches the laminate may be assembled using either a high or low-pressure technique (Column 3, lines 34-52). In addition, Min teaches producing the decorative laminate using a continuous laminate press (example 2, Column 10, lines 20-34). Min incorporates as reference US patent 5,141,799 to Mehta that teaches forming the wear/abrasion resistant overlay by adding amorphous silica in the form of an aqueous slurry to the surface of a substrate (Column 6, lines 7-26). Alternatively, US patent 4,713,138 also incorporated as reference by Min discloses depositing a coating composition comprising resin and abrasion resistant mineral particles such as alumina on the surface of a decorative layer (Column 6, lines 40-52). Min teaches that having a printed or colored decorative layer that may or may not be treated with a melamine resin (Column 7, lines 25-30). Example 1 teaches a melamine formaldehyde impregnated overlay containing hard particles of alumina or silica (Column 10, lines 19-22).

Min fails to teach a core layer comprising PETG, but does disclose that the core layer can include one or more layers of a polyester material. In addition, Min also teaches that core layer

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may have a sandwich arrangement comprising resin impregnated sheets and any one of the layer materials discussed above (Column 7, lines 59-63). The patent issued to Eckart et al., teaches sandwiching a decorative film layer between two layers of PETG co-polyester. With regard to the material and orientation limitations set forth in claims 6 and 7, Min teaches a sandwich orientation for the core layer using a variety of materials including layers of polyester, nylon or carbon fibers as well as woven or woven or non-woven sheets. Therefore, motivated to provide a decorative laminate having sufficient strength and durability, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the specific PETG copolyester taught by Eckart et al. to form the core layer in the decorative laminate of Min.

8. Claims 31,40,64 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Min, US 6,093,473 in view of Eckart et al., US 5,643,666 as applied to claims 20, 33, 53, 65, and 84 above and further in view of Guyette, US 5,425,986.

The combination of prior art fails to teach using fiber reinforced cement board as the water resistant substrate, however the patent issued to Guyette teaches a high pressure laminate comprising a fiber cement-board core (Abstract and Figure 1). Guyette discloses that said fiber cement-board is well known to those skilled in the art and is readily commercially available. Therefore, motivated by the desire to manufacture a laminate structure having a water resistant layer, it would have been obvious to one having ordinary skill in the art to select a known material, which is readily commercially available such as the fiber cement-board taught by Guyette et al in the laminate structure of Min and Eckart et al.

9. Claim 89 is rejected under 35 U.S.C. 103(a) as being unpatentable over Min, US 6,093,473 in view of Eckart et al., US 5,643,666 as applied to claim 84 above.

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The combination of prior art fails to teach using PCTG (polycyclohexanedimethyl terephthalate glycol) instead of polyester or PETG (polyethylene terephthalate glycol), however, it would have been obvious to one having ordinary skill in the art to employ a moldable thermoplastic resin such as a glycol-modified copolyester ("PCTG") of polycyclohexane dimethylene terephthalate to form the polymeric base layer. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416

Conclusion


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

December 9, 2003

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TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700